

REMARKS

Claims 1-7 are pending in the present application. All claims were rejected. The Examiner rejected Claims 1-7 under 35 U.S.C. §112 first paragraph as not in compliance with written description requirement; Claims 1-3 and 6 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,851,078 (Short), and Claim 5 under 35 U.S.C. §103(a) as being unpatentable over Short in view of U.S. Patent No. 5,506,433 (Ohori).

In response Claim 7 has been cancelled and Claims 1-4 have been amended to remove the word “arrangements” considered by the Examiner to be new matter. With regard to Claim 4, GaN-based high-electron mobility transistors (HEMTs) and optoelectronic devices have been deleted from the Markush group listing of the materials, as requested by the Examiner.

The term hybrid, as used in the present application, means **a plurality of single crystal materials**, where **a variety of devices** can be fabricated within each of the different materials. The object of the present invention is to build different devices using different substrates on one chip. More specifically, the material 150A, 150B, and 150C (depicted in Figures 4 and 6 of the invention) are all different materials.

Contrarily, Short is a method of forming a high quality dielectrically isolated silicon on insulator semiconductor device using a double wafer bonding process. The Short teaching of how to form SOI, implies that silicon on insulating substrate and anything else formed inside the trench (moat) can not be used to form useful devices, for example, oxide, polysilicon, etc. These are materials for isolation and filling purposes.

The finished structure of Short, shown in FIG. 20, has a typical dielectric isolation (DI) structure with single crystal silicon islands 70, surrounded by a sidewall oxide 60 and bottom oxide 45, 55, separated by polycrystalline silicon 65 formed into the surface. It is not possible for Short to have different material in 70 in FIG. 20 or 10 in FIG. 10.

The material used inside the pocket in Short is from the same source and therefore of the same kind. This contradicts and teaches away from the present invention, where different pieces of material from different sources are placed in each corresponding pocket, and therefore, the

thickness of each of these materials in separate packets is different before planarization as indicated in Fig-4, t1, t2 and t3, etc.

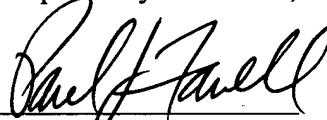
Short describes how to form SOI using only one type of material. Short does not teach or describe a hybrid substrate including "at least two different materials deposited within a respective pocket of the plurality of pockets" recited in Claim 1.

As with regard to Ohori, similar to Short, it uses only one type of material on Sapphire, and no hybrid is disclosed.

Without conceding the patentability per se of dependent Claims 2-6 , it is respectfully submitted that the rejection of these claims should be withdrawn by virtue of their dependence on Claim 1.

Applicants submit that Claims 1-6 are believed to be in condition for allowance. Allowance is respectfully requested. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,



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